TAOGLAS®

Datasheet

Part No:
FG.27.A

Description

2.4GHz 12dBi Panel Antenna 300mm ULA-198 Pigtail with N Type Male Connector

Features:

2.4GHz 12dBi Panel Antenna
Dimensions: 210 x 210 x 74mm
Cable: 300mm of RG-58
Connector: N-Type (Male)
RoHS & Reach Compliant

Ireland & USA
ISO 9001:2015
Certified

Taiwan
ISO 9001:2015
Certified

1. Introduction

The Taoglas **FG.2x Series** of compact 2.4GHz Panel antennas are specially designed to provide directional wireless communication. The panel design combines a sleek, low-profile design with high-performance, delivering superior performance characteristics. Focused on high-performance signal transmission and reception, they are perfect for applications requiring long range, faster data rates and more resilient connections. The FG.26 offers a peak gain of up to 7dBi and the FG.27 reaches up to 12dBi, both with great efficiency of over 60%.

Typical Applications Include:

- Point to Point and Point to Multipoint Wireless Networks
- In-building and Backhaul Networks
- Long Range Wi-Fi® Coverage for Smart City Applications
- Wireless Surveillance Systems
- Wi-Fi® Hotspot Expansion, e.g. Factories and Dockyards

The IP65 waterproof rated antenna enclosure is made from UV resistant ABS making it ideal for use in challenging environments and wide temperature ranges. It is supplied with a mounting bracket that allows for positional tilt and swivel to optimise the directionality of the antenna. The FG Series is supplied with RG-58 cable and N-Type connectors as standard, both of which can be fully customised to suit your requirements pending MOQ.

For further information or samples, please contact your regional Taoglas customer support team

2. Specification

| Wi-Fi/BT/ISM Electrical											
Band	Frequency (MHz)	Efficiency (%)	Average Gain (dB)	Peak Gain (dBi)	HPBW (ǒegrees)	FtB Ratio (dB)	SLL (dB)	Impedance	Polarization	Radiation Pattern	Max. input power
Wi-Fi 2.4GHz	2400-2500	63.9	-1.95	11.81	> 30 (H & V)	27 max.	12 max.	50 Ω	Linear	Directional	10W

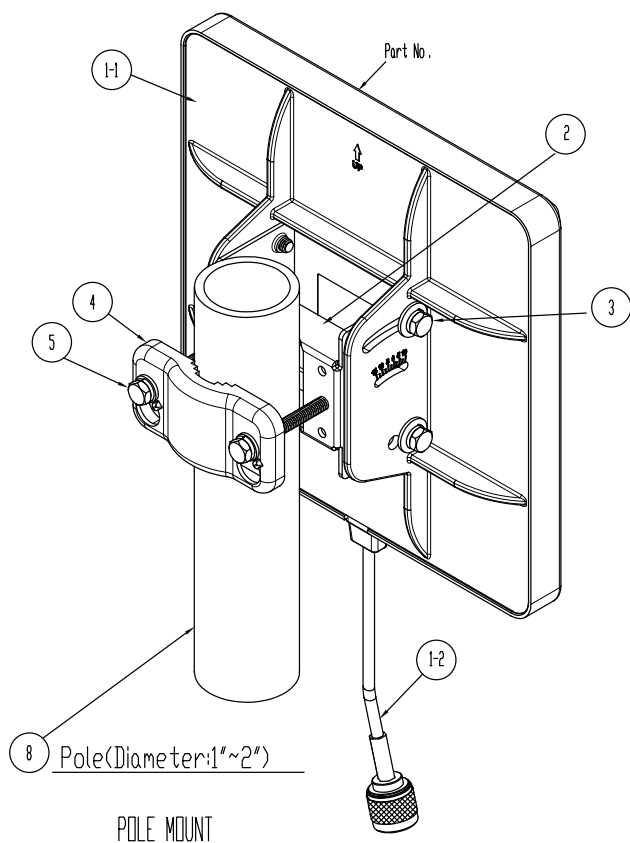| Mechanical	
Dimensions	210 x 210 x 74mm
Material	ABS PA-777B+UV
Connector	N Type (M)
Cable	300mm of RG-58

Environmental	
Operation Temperature	-40°C to 80°C
Storage Temperature	-40°C to 80°C
Waterproof	IP65
Relative Humidity	Non-condensing 55°C 95% RH

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3. Mechanical Drawing
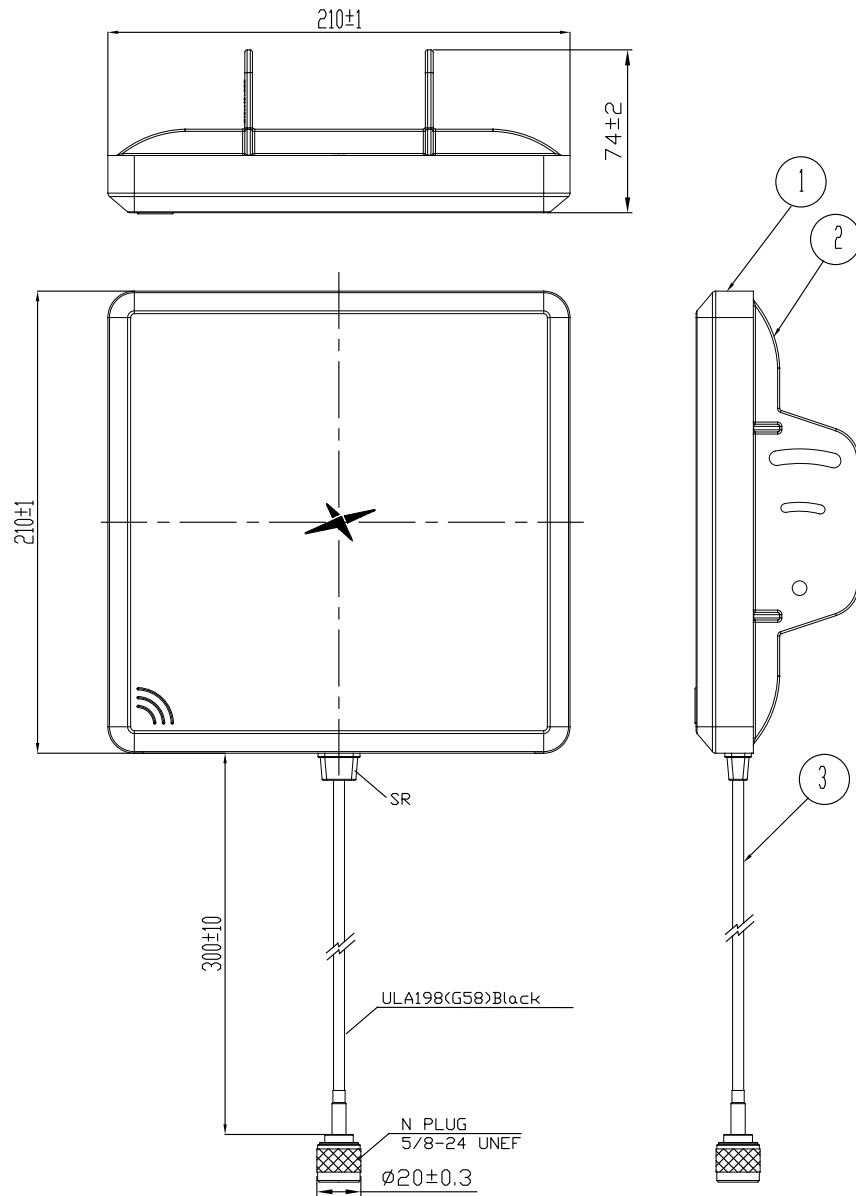
③	Cable ASS'Y (B) +N Plug+SR 300mm	ULA198 (RG58)Black Cable	1
②	Rear Cover	ABS PA-777B+UV	1
①	Front Cover	ABS PA-777B+UV	1
ITEM	DESCRIPTION	MATERIAL	Q'TY

4. Installation Guide

Part No.

Pole(Diameter:1"~2")

POLE MOUNT

WALL MOUNT
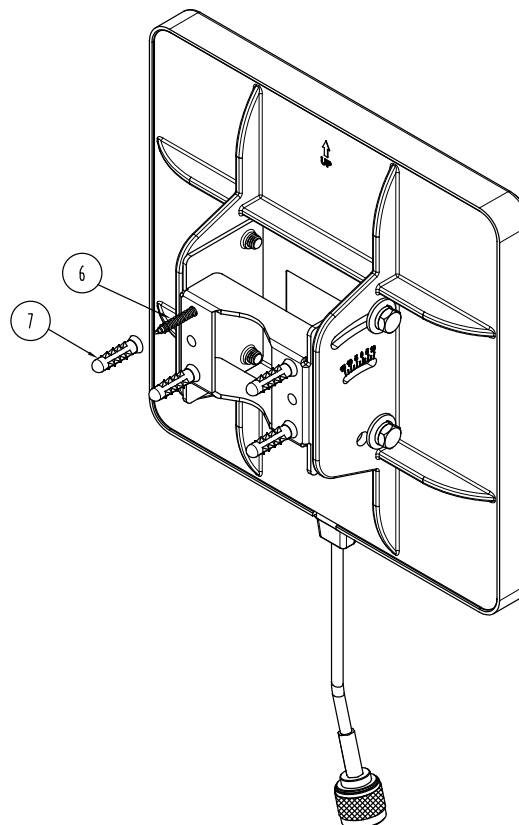
ITEM	Graphics	Size(LxWxH)	Q'TY
5		M6-Ø10*60mm(screw) M6-Ø12.2x1.5mm(s/w) M6-Ø12.5*1.5mm(w)	2set
4		83.6x42x15.5mm	1pc
3		M6-Ø10*16mm(screw) M6-Ø12.2x1.5mm(s/w) M6-Ø16*1.5mm(w)	4set
2		76.6x76x46mm)	1pc
7		Ø8x25mm	4pcs
6		TH5/32"-16*3/4" (Ø9x19mm)	4pcs

ITEM	DESCRIPTION		MATERIAL	Q'TY
7	Anchor		PP	4
6	TH5/32"-16*3/4'TP-A screw		SUS302	4
5	M6 W(12.5mm)		SUS304	2
	M6 S/W		SUS304	2
	XH M6-1.0*60mm screw		SUS302HQ	2
4	Lock frame		SUS430	1
3	M6 W(16mm)		SUS304	4
	M6 S/W		SUS304	4
	XH M6-1.0*16mm screw		SUS302HQ	4
2	M-Stape mounting		SUS430	1
1-2	Antenna Body-Cable Ass'y(N Plug)		ULA198(RG58)Black	1
1-1	Antenna Body-Rear Cover		ABS PA-777B+UV	1
1	Antenna Body-Front Cover		ABS PA-777B+UV	1

5. Packaging

1 Pcs per PE bag

1 pcs per zipper bag

1pcs per box
Box dimensions: 250 x 90 x 30mm
Weight: 1.1Kg

SPE-24-8-241-B
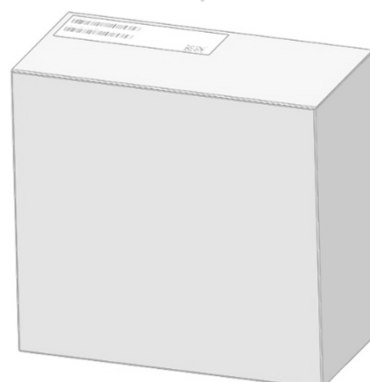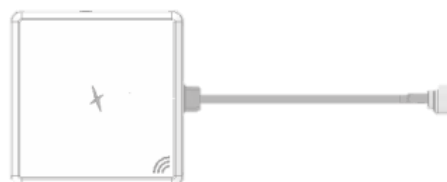
10pcs per carton
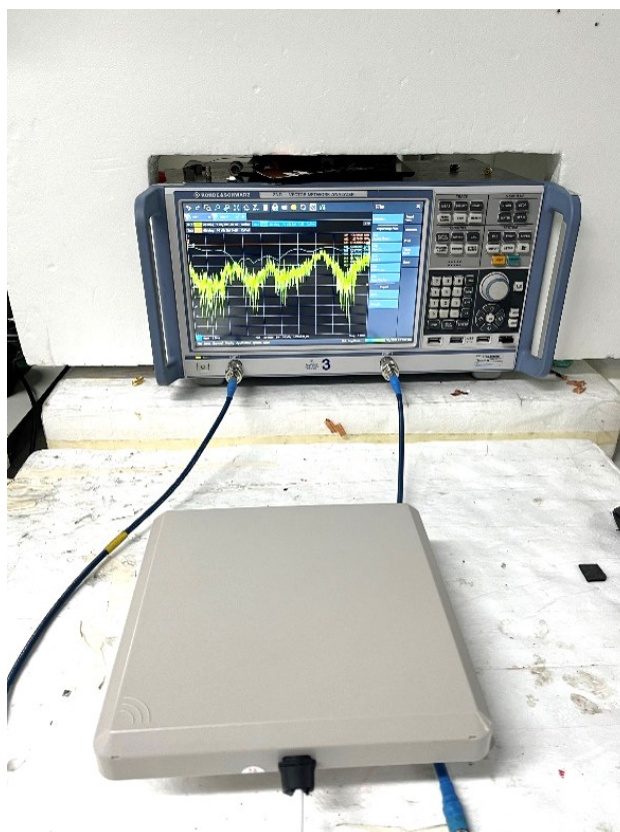Carton dimensions: 520 x 475 x 265mm
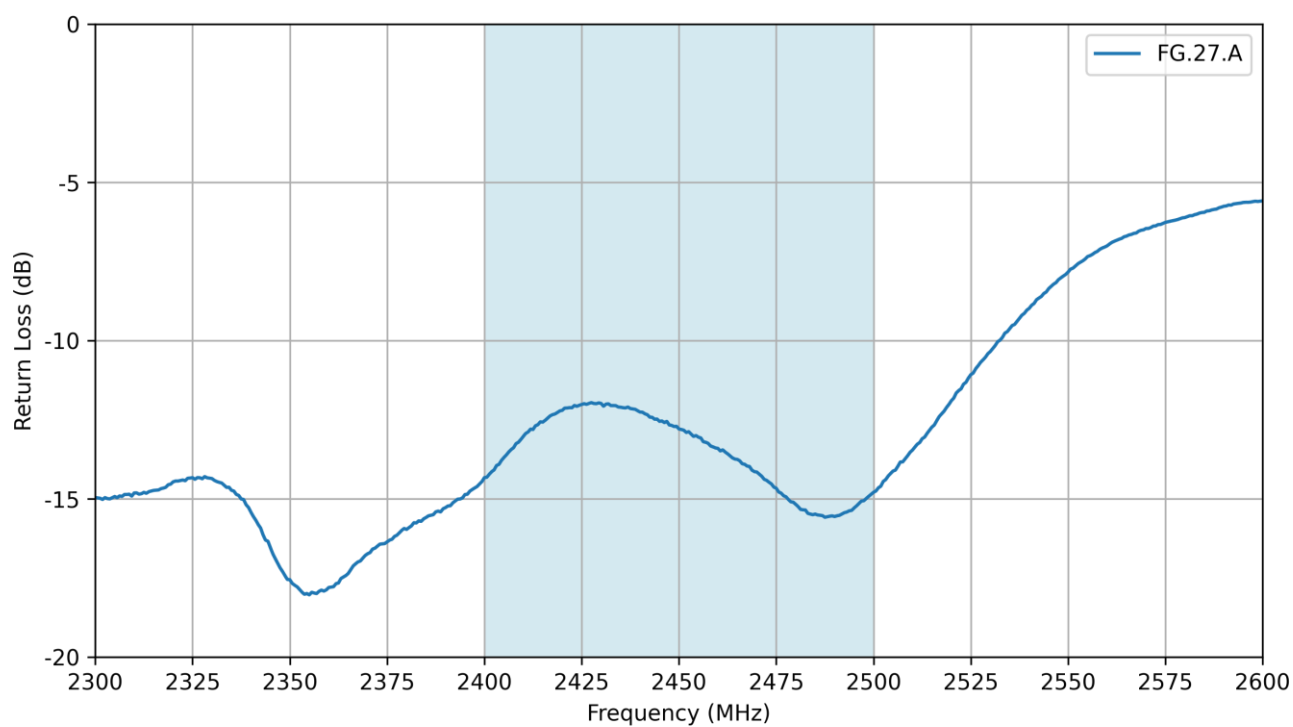Weight: 12.54Kg

6.1 Test Setup
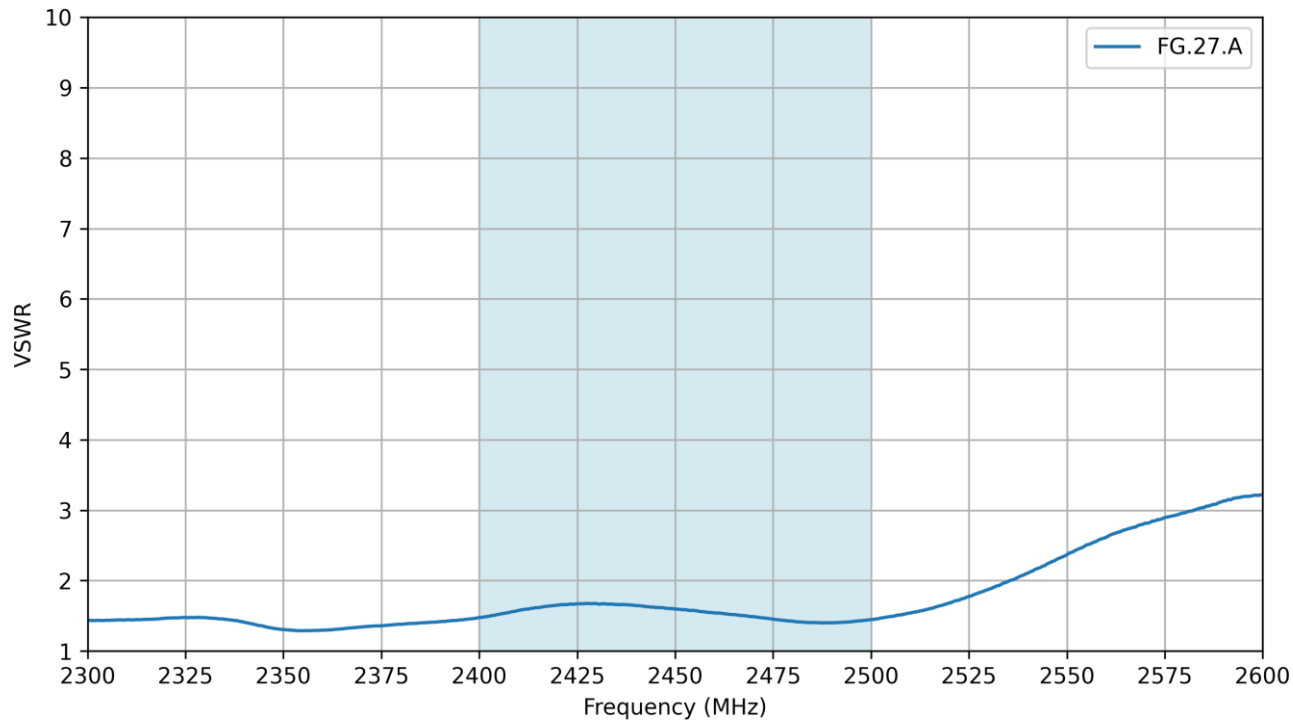
AUT

Vector Network Analyzer

VNA Setup

6.2 Return Loss

6.3 VSWR
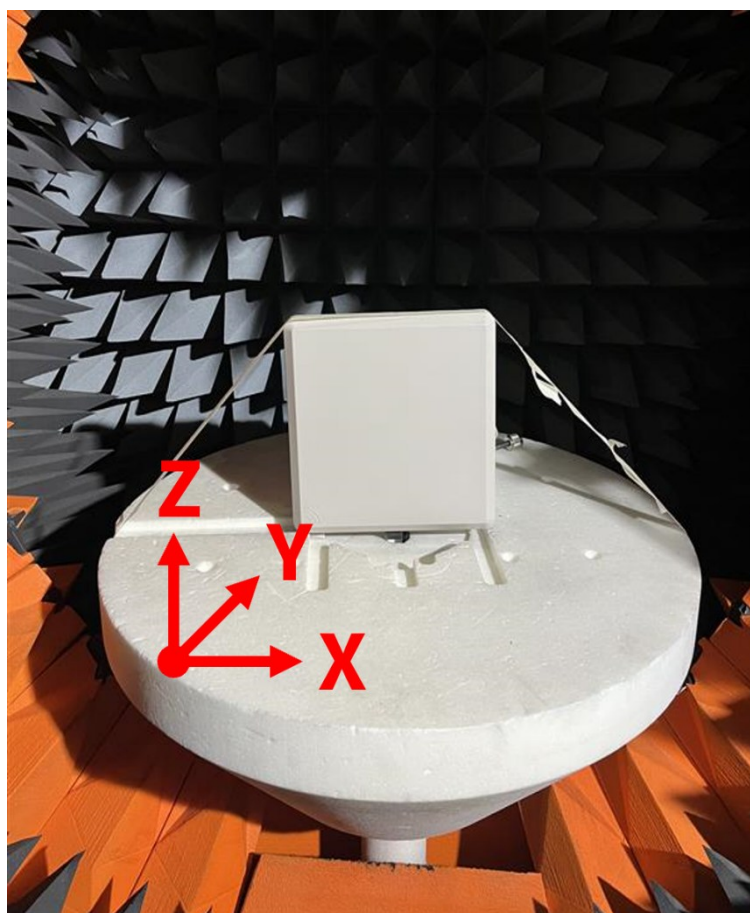
6.4 Efficiency

6.5 Average Gain

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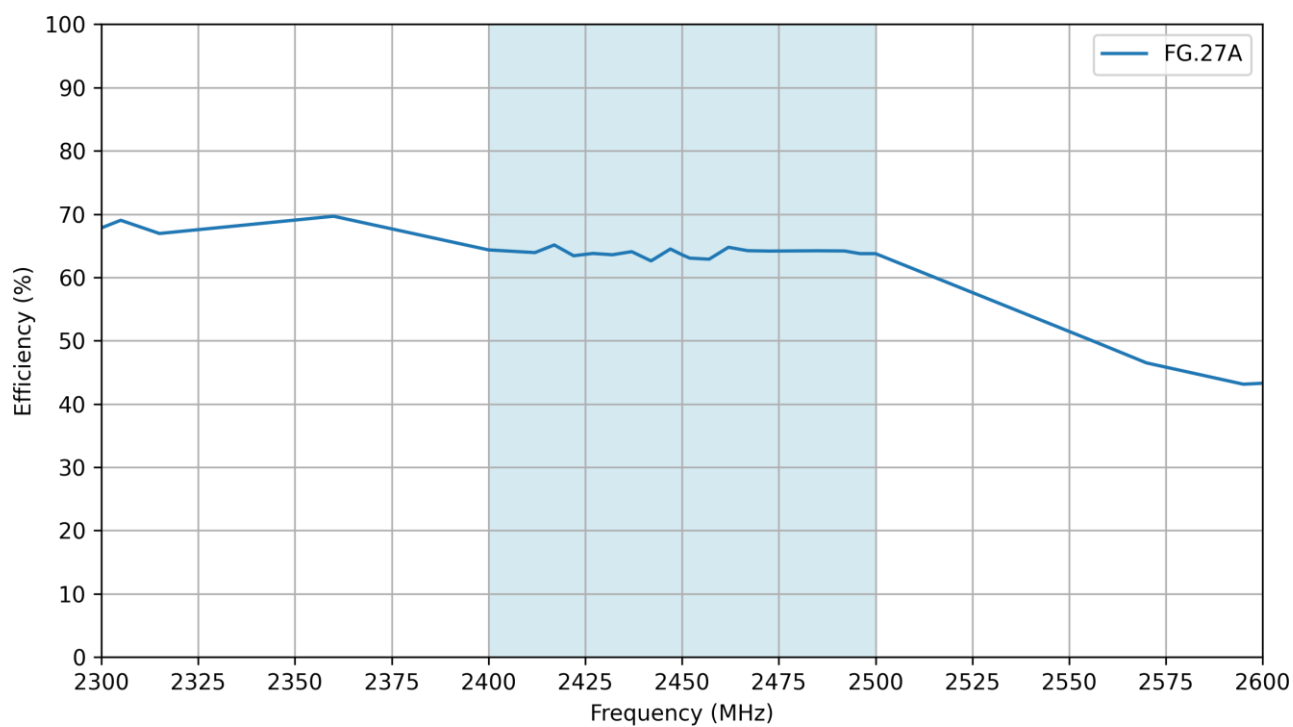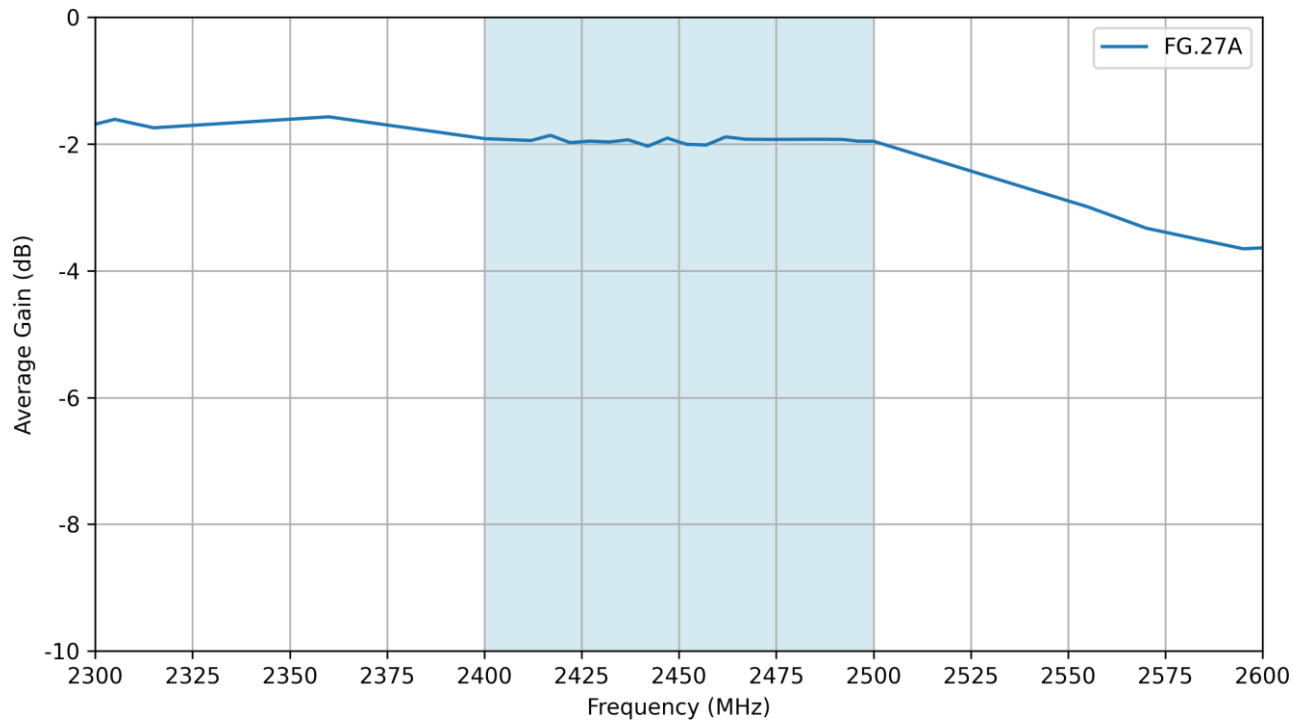
6.6   Peak Gain
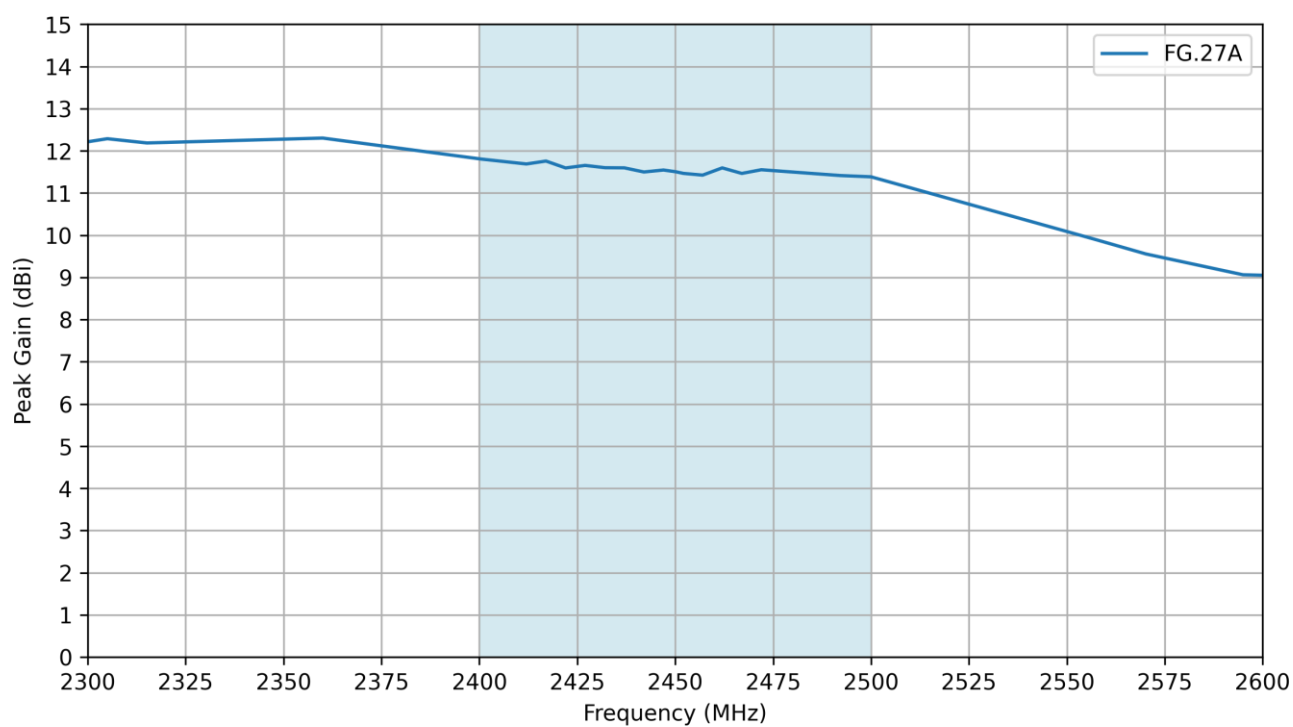
7. Radiation Patterns

7.1 Test Setup

Anechoic Chamber
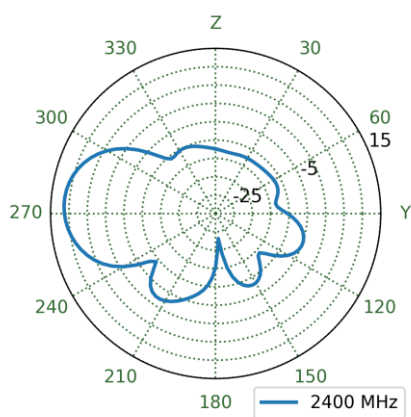
Rx Ant.

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Vector Network Analyzer
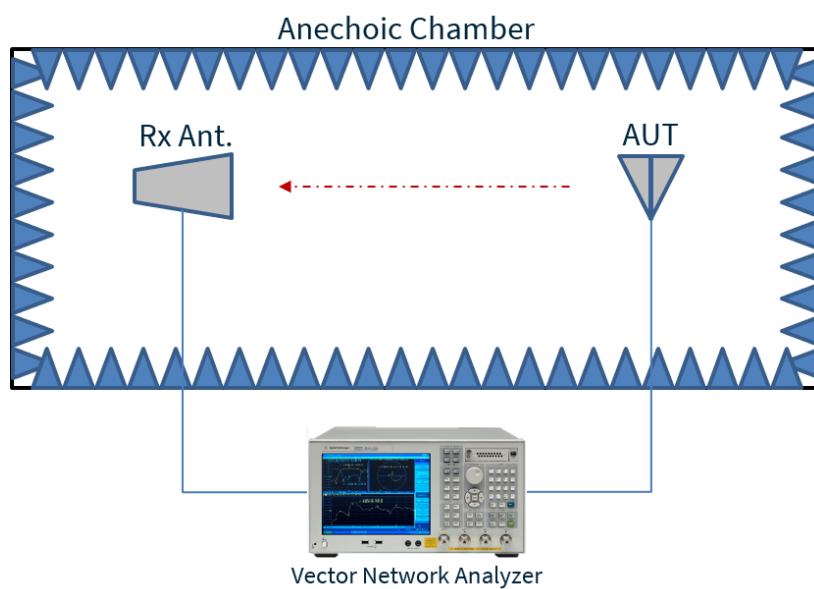
Chamber Setup

7.2 Patterns at 2400 MHz
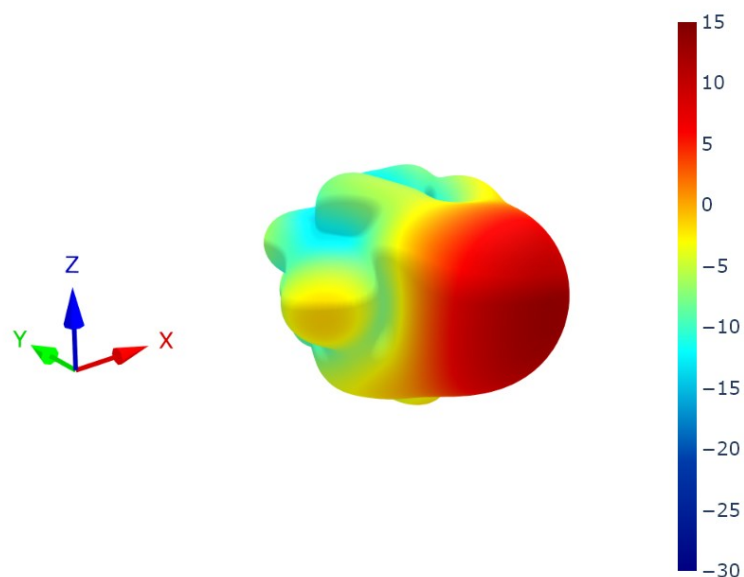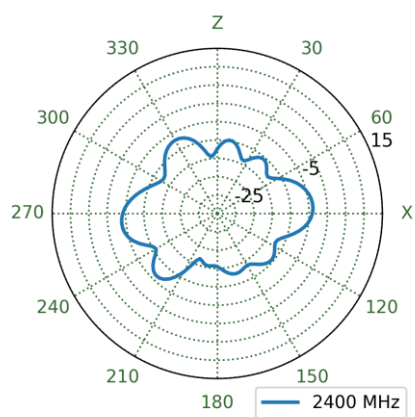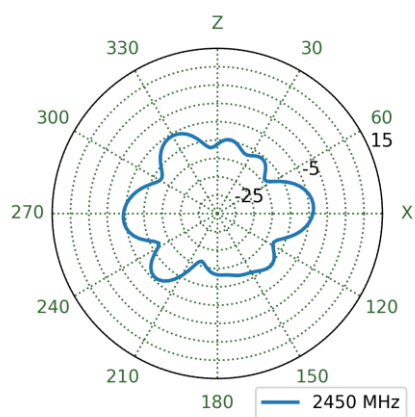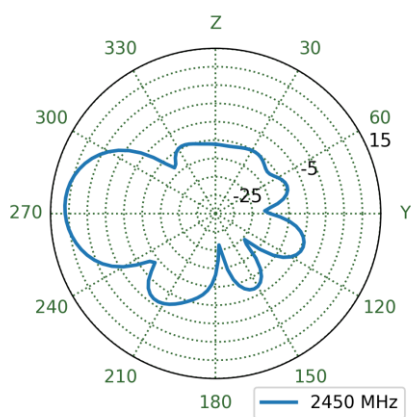

XZ Plane	YZ Plane	XY Plane
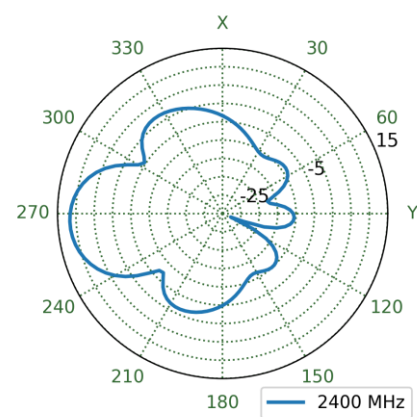
7.3 Patterns at 2450 MHz
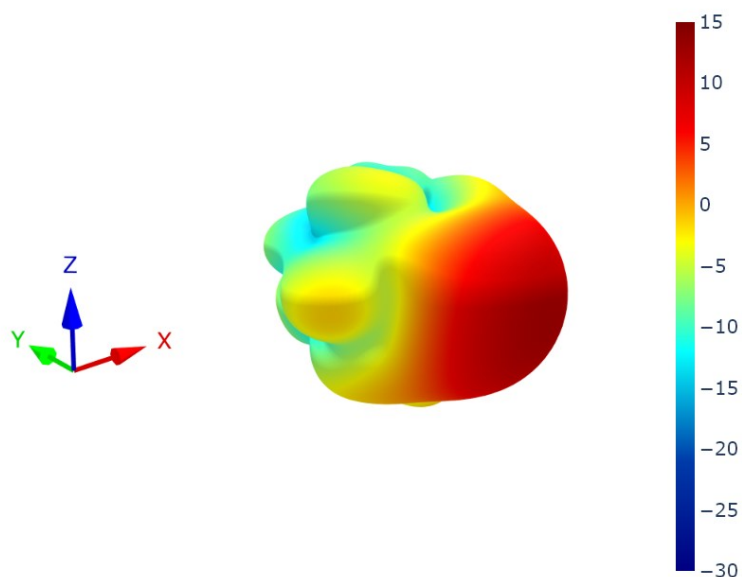
XZ Plane	YZ Plane	XY Plane
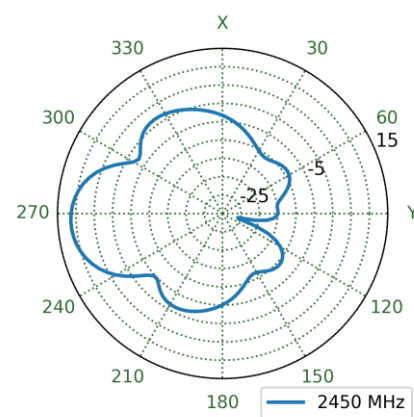
7.4 Patterns at 2500 MHz
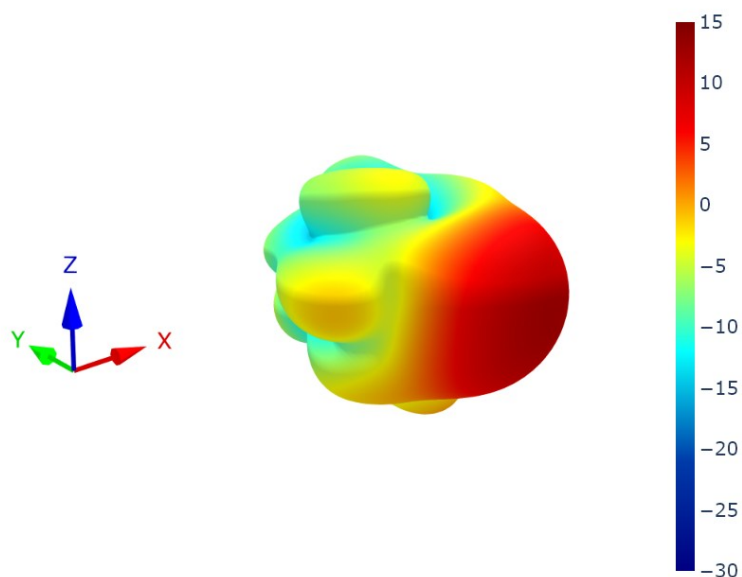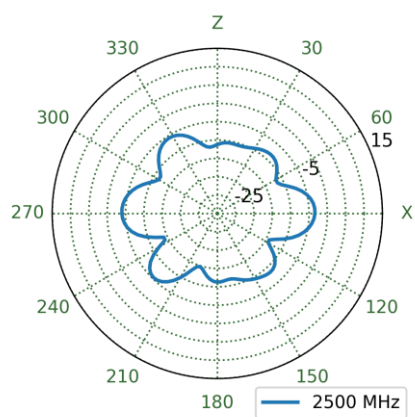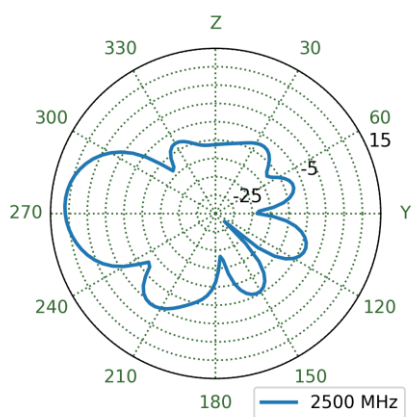
XZ Plane	YZ Plane	XY Plane
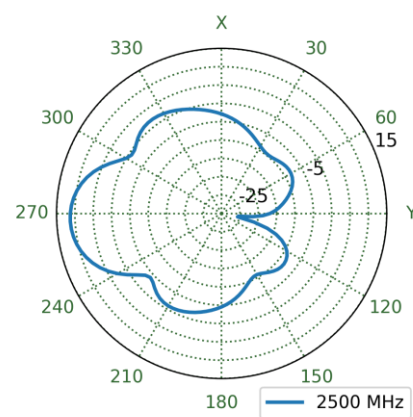
Changelog for the datasheet

SPE-24-8-241 – FG.27.A

Revision: B (Current Version)

Date:	2025-12-03
Notes:	Updated Environmental table
Author:	Cesar Sousa

Previous Revisions

Revision: A (Initial Release)

Date:	2024-09-26
Notes:	Initial Datasheet Release
Author:	Gary West

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